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on Figure 2, and are circled by a broken dashed line (since this amendment is submitted by fax). The proposed changes are merely changes in item numbers to correctly correspond to the text, and no new matter is included in the drawing amendments. The specification has been amended accordingly.

Remarks

Claims 1 through 27 remain pending in the application.

The Office Action objects to the drawings. Applicant has proposed corrections to the drawings accordingly.

The Office Action objects to the specification. Applicant has amended the specification accordingly. Applicant has also amended the specification to include the term "outer cover" as described in the claims.

The Office Action rejects claims 1 through 17 as indefinite under the assertion that the phrase "an cover disposed..." renders the claim indefinite. Regarding claims 1 and 8, the Office Action further states that the claims contain phrases that lack sufficient antecedent basis.

The claims, as amended, refer to "an outer cover disposed on the outside of the upper..." This element clearly describes the outer covering of the claimed boot. The cover is described in both the description and the drawings (see page 4, line 22 and also Figure 2.) With regard to the rejections of claims 1 and 8, Applicant has amended the claims accordingly.

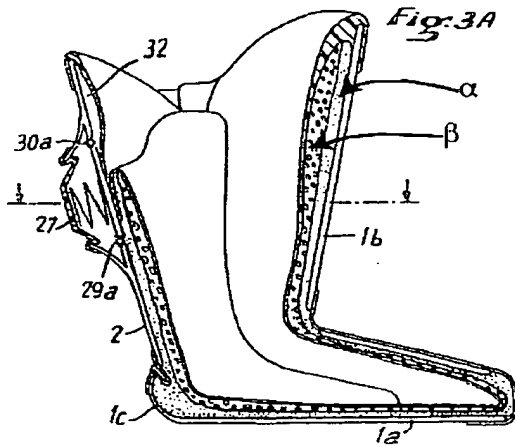
The Office Action rejects claims 1 through 7, 9 through 16 and 18 through 27 as obvious over Porcher, Ski Boot, U.S. Patent 4,702,022 (Oct. 27, 1987) in view of Dalvy et al., Internal Liner for a Boot, U.S. Patent 5,924,218 (Jul. 20, 1999) in view of Mashita et al., Footwear Member, U.S. Patent 5,681,649 (Oct. 28,

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1997) under the assertion that Porcher discloses all the limitations, including a liner with multiple resilient layers; that Dalvy teaches a gel pad located between the layers of an inner boot; that Mashita teaches that a gel pad of styrene and butadiene can be located in the toe box area; and that it would have been obvious to place a gel pad in the toe box area as taught by Mashita and to place a gel pad in the heel area of the liner of Porcher to aid in protection and comfort of the user's foot. With respect to the different hardnesses of the toe box and heel counter, the Office Action asserts that it would have been a mere matter of testing and optimization to find a combination of material that would provide the desired comfort and protection that would meet the desired total hardness of different areas of the boot.

The Examiner's proposed combination does not result in the claimed invention. Contrary to the assertion of the Office action, Porcher does not show a boot liner with multiple resilient layers that extend into the heel and forefoot areas. Rather, Porcher shows a boot with a single resilient layer in the heel and forefoot areas and a vacuum chamber for tightening the boot around the wearer's leg. With regard to Figure 3A, reproduced below, Porcher shows a boot with a single layer of resilient material and a vacuum chamber.

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Applicant has added two arrows, α and β , to indicate two areas shown in the figure but not described by Porcher. The area indicated by arrow α is the layer of resilient material. The area indicated by arrow β is empty to create room for the vacuum chamber. The "bubbles" visible in the area indicated by arrow β show the surface of the resilient layer and do not indicate the presence of a second layer. This fact is also shown by the rest of the figures and by the description in Porcher. Thus, Porcher shows only a single layer. (Two "portions," 40 and 41, are shown in the neck portion of Porcher's boot, as shown in his Figure 3B, to allow the folds in the boot cover to extend into parts of the vacuum chamber, though it is unclear from the drawings and specification whether there are two distinct layers of resilient material. Even if there are distinct layers, the layers do not extend into the toe box and heel areas as asserted by the Office Action. See also Column 3, lines 6 through 18 and Column 3, line 64 through column 4, line 9.) Since Porcher shows only a single resilient layer in his boot, the boot of the proposed combination does not result in the claimed invention. Accordingly, all of the claims are non-obvious.

In addition, the boot of the proposed combination is inoperative or would result in a very uncomfortable boot. With respect to Dalvy, the Dalvy "wedging element" is a thermoplastic

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material having a plurality of micro-perforations disposed in it. The micro-perforations provide for air flow within the wedging element that allow hot air to diffuse throughout the wedge to make it plastically deformable, so that the wedge will conform to the shape of the wearer's foot. In the boot of the proposed combination, Dalvy's wedging element would be disposed between resilient layer and the inner lining, between the resilient layer and the outer lining or would replace the resilient layer. Whatever the case, Porcher still relies on a vacuum to secure his boot to the wearer's foot. Warm air would not diffuse throughout the boot and thus the wedging element would not conform well to the shape of the wearer's foot. (If warm air was circulated inside the boot before the boot was closed, then the wedging element would not be pressed against the wearer's foot and the wedging element still would not conform to the shape of the wearer's foot.) Thus, the boot of the proposed combination is inoperative and the claims are accordingly non-obvious.

Even if the boot were operative (in the sense that a person could force their foot into the boot) the boot would be uncomfortable since the wedging element would not conform to the wearer's feet. No one would be motivated to create a less comfortable boot. Thus again, the claims are non-obvious.

With respect to all of the claims, Mashita adds nothing to the proposed combination that would render the claims obvious. The proposed combination still does not meet the limitations of the claims and the proposed combination is still inoperative. In addition, with respect to claims 5 through 7, 13 through 17, 20 through 21 and 25 through 26, Mashita does not provide any indication of *where* his pad should be placed with respect to various layers in a boot. Thus, again, the proposed combination does not render the claims obvious.

In addition, the Office Action appears to have applied a rule contrary to the obviousness statute. The Office Action statement

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that, "it would have been a matter of mere testing and optimization to find a combination of material that would.. meet the desire total hardness of different areas of the boot" is factually incorrect and seems to apply an incorrect rule regarding obviousness rejections. With regard to the factual basis for the statement, there is no indication in the art that shows that making a boot of a particular hardness is a "mere" matter of testing and optimization. If such an indication does exist, Applicant requests that the Examiner provide it so that Applicant may have an opportunity to respond.

Even if such a motivation does exist it is irrelevant to the obviousness inquiry, as the rule applied by the Examiner is squarely contradictory to the provision of 35 U.S.C. § 103(a) that states, " ..Patentability shall not be negatived by the manner in which the invention was made." Even if Applicant discovered the claimed inventions by experimentation, the claimed inventions are still non-obvious. The "mere" act of "testing and optimization" does not render the claimed subject matter obvious.

Indeed, a great deal of thought and energy goes into how hard or soft to make a boot, since these decisions affect the comfort and protective ability of the boot. Arriving at a boot design to effect certain hardnesses in various portions of the boot is a difficult task. For example, the whole point of the Mashita patent is to teach one how to build a shoe pad having improved "physical properties." Mashita seems to indicate that arriving at the materials needed to create a boot with areas of certain hardnesses is a difficult matter of hypothesis and experimentation (particularly with regard to the material to be selected).

Mashita states that, "by using the polymer composition defined herein as a cushioning material, there is obtained a footwear member which is improved in cushioning and economic aspects," and then proceeds to go into excruciating detail on how to build the cushion and shoe. If providing a shoe with a

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particular comfort, protection and hardness were a mere matter of optimization, then Mashita would not have been patentable. Mashita also would not have wasted time describing the extensive materials and processes need to make his shoe and shoe cushion.

Thus, contrary to the Office Action statement, the combination of material, design and hardness of the boot is important and not a matter of mere optimization. In addition, none of the references show or suggest a boot having certain sections of a particular hardness. Given these two facts, the claims relating to the hardness of parts of the claimed boot are non-obvious.

With respect to claims 2 and 10, Mashita does not specifically show a gel pad made from a mixture of styrene and 1,3 butadiene. Given the vast number of possible combinations provided by Mashita, one of ordinary skill in the art would have no motivation to try any particular modification of a disclosed substance. Thus, the claimed combination is non-obvious in view of Mashita. Furthermore, the particular combination of materials is important with respect to the final result, as described by Mashita:

The medium material is a material having a function as a medium between the low molecular weight and the high molecular weight or polymer material. *It is a key material in achieving the object of the present invention.*"

(Column 3, lines 27 through 30. Emphasis added). Mashita then goes on to describe different materials that can be used for the medium of his gel pack, but Mashita is careful to put limits on the ratios of the mixture. The natural conclusion to draw from Mashita is that the precise mixture of materials has a real impact on the performance of the final product and that the mixture is very difficult to formulate without Mashita's disclosure. Since Mashita does not show the claimed combination, and since one of

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ordinary skill would not be motivated to modify Mashita, claims 2 and 10 are non-obvious over the proposed combination.

In addition, the Office Action has provided no motivation to combine the references. The Office Action has stated purported advantages to the boot of the proposed combination with statements such as, "to aid in protecting the user's foot and to help in cushioning the user's foot and fitting the boot to the user's foot," and "cushioning, protecting and comforting the user's foot," but these statements do not state *why* one of ordinary skill in the art would be motivated to combine or modify the references. Even if the advantages are true, their mere existence does not mean that one of ordinary skill would have been motivated to combine the references *in the way proposed by the Office Action*. In other words, the mere existence of an advantage provides no indication, by itself, that one of ordinary skill in the art would recognize the advantage and be motivated to combine the references.

In the case at hand, Porcher shows a boot that self-closes and he seeks a solution to the problem of closing ski boots. Dalvy shows a boot with a thermoplastic wedging element and seeks a solution to how to form-fit boots to a wearer and to do so without requiring constant re-treatments of the wedging element. Mashita shows a gel pad for use inside shoes or boots and seeks to solve the problem of how to make a gel pad having "superior" cushioning properties. A pre-existing motivation must exist within these references or be commonly known within the art to combine these references in the way proposed. The Office Action has not provided one, and thus the Office Action has failed to state a prima facie obviousness rejection of the claims.

In addition, none of the references provide any indication that one would benefit from the other. As described above, the references solve different problems. The references therefore represent complete solutions to the problems they address and thus

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there is no motivation to combine the references. Accordingly, the claims are non-obvious.

The Office Action rejects claim 8 as obvious over Porcher, Dalvy, Mashita and Wagonhurst, Size-Adjustable Footwear, U.S. Patent 6,082,027 (Jul. 4, 2000). The Office Action rejects claim 17 as obvious over Porcher, Dalvy, Mashita and Japanese reference H1-55802 (JP '802). Applicants have canceled claims 8 and 17, thus mooting the rejections.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

Date: July 2, 2003

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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re Application of:

Baek

Serial No.: 09/996,398

Filed: November 28, 2001

For: Boot Liner with Gel Pads

Art Unit: 3728

Examiner: Stashick, A.

ATTACHMENT OF CLAIMS AND AMENDED SPECIFICATION PARAGRAPHS

The claims, including those amended by the Response submitted herewith on July 2, 2003, are as follows:

1. (amended) A boot comprising an outer shell and a boot liner, wherein the boot liner is adapted to be disposed within the outer shell during use, and wherein the boot liner comprises:

an upper, a sole disposed beneath the upper, a toe box disposed in the forward portion of the upper and above the sole, a heel counter area disposed in the rearward portion of the upper, an outer cover disposed on the outside of the upper, a first layer of resilient material disposed within the outer cover, a second layer of resilient material disposed within said first layer of resilient material, and an inner lining disposed within said second layer of resilient material; and

a resilient pad disposed in the toe box, said resilient pad fixed between the outer cover and the inner lining of the toe box.

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2. (unchanged) A boot as in claim 1 wherein the resilient pad comprises a mixture of styrene and 1,3-butadiene.
3. (unchanged) A boot as in claim 1 where the durometer value of the toe box as measured from the inner lining to the outer cover is about 14 (Shore A).
4. (unchanged) A boot as in claim 1 where the durometer value of the toe box as measured from the outer cover to the inner lining is about 18 (Shore A).
5. (unchanged) A boot as in claim 1, wherein said resilient pad is fixed in the toe box between the first layer of resilient material and the second layer of resilient material.
6. (unchanged) A boot as in claim 1 wherein said resilient pad is fixed in the toe box between the cover and the first layer of resilient material.
7. (unchanged) A boot as in claim 1, wherein said resilient pad is fixed in the toe box between the second layer of resilient material and the inner lining.
9. (unchanged) A boot as in claim 1 further comprising:
 - a third layer of resilient material disposed between the first and second layers of resilient material, where said third layer of resilient material is further disposed in the rear portion of the boot; and,
 - a resilient heel pad disposed in the heel counter area, said resilient heel pad fixed between the outer cover and the inner lining.
10. (unchanged) A boot as in claim 9 wherein the resilient pad comprises a mixture of styrene and 1,3-butadiene.

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11. (unchanged) A boot as in claim 9 where the durometer value of the heel counter area, as measured from the inner lining to the outer cover, is about 6 (Shore A).

12. (unchanged) A boot as in claim 9 where the durometer value of the heel counter area, as measured from the outer cover to the inner lining is about 48 (Shore A).

13. (unchanged) A boot as in claim 9, wherein said resilient heel pad is fixed between the first layer of resilient material and the outer cover.

14. (unchanged) A boot as in claim 9, wherein said resilient heel pad is fixed between the first layer of resilient material and the second layer of resilient material.

15. (unchanged) A boot as in claim 9, wherein said resilient heel pad is fixed between the second layer of resilient material and the third layer of resilient material.

16. (unchanged) A boot as in claim 9, wherein said resilient heel pad is fixed between the third layer of resilient material and the inner lining.

18. (unchanged) A boot characterized by a sole and an upper, said upper further characterized by an instep area and a toe box located at the front of the upper forward of the instep area and having a rear boundary forward of the instep area, wherein the toe box area comprises:

a first layer of resilient material, a second layer of resilient material, and a gel pad disposed between the first layer of resilient material and the second layer of resilient material.

19. (unchanged) The boot of claim 18 wherein the gel pad is comprised of styrene butadiene rubber.

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20. (unchanged) The boot of claim 18 wherein the gel pad does not extend substantially rearwardly of the toe box.

21. (unchanged) The boot of claim 18 wherein the gel pad extends rearwardly from the tip of the toe box and terminates at a point forward of the instep.

22. (unchanged) The boot of claim 18 wherein the durometer value of the toe box, as measured from the inside of the boot lining, is about 14.

23. (unchanged) A boot characterized by a sole and an upper, said upper further characterized by an ankle area, an arch area, an instep area, and a heel counter area located at the rear of the upper rearward of the ankle area and arch area, wherein the heel counter area comprises:

a first layer of resilient material and a second layer of resilient material, and a gel pad disposed between the first layer of resilient material and the second layer of resilient material.

24. (unchanged) The boot of claim 23 wherein the gel pad is comprised of styrene butadiene rubber.

25. (unchanged) The boot of claim 23 wherein the gel pad does not extend substantially forward of the heel counter area.

26. (unchanged) The boot of claim 23 wherein the gel pad extends forwardly from rear of the heel counter area and terminates at a point behind the arch area.

27. (unchanged) The boot of claim 23 wherein the durometer value of the heel counter area, as measured from the inside of the boot lining, is about 6.

The specification paragraphs, in marked-up form, amended in the response submitted herewith on July 2, 2003 are as follows:

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The paragraph starting on page 4, line 18 is as follows:

The boot liner is composed of several layers of cloth, foam rubber, latex, and gel which vary in dimension and composition in different parts of the boot. Referring to the front of the boot, the toe box 14 is formed with four layers of cloth and foam, including [a] an outer cover 20, an outer foam layer 21, an inner foam layer 22, and a lining 23. The outer cover 20 is a heavy cloth, such as mesh or fleece, but could also be cordura, plastic, synthetic leather, or action nubuck. The outer cover 20 may include several additional layers to create an outwardly attractive appearance. Preferably, when made in combination with all the specified elements of the boot liner, the foam layers 21 and 22 comprises polyethylene, but may also comprise ethyl vinyl acetate (EVA), latex, or polyurethane foam.

The paragraph starting on page 5, line 1 is as follows:

A gel pad 25 is disposed between the two foam layers of the toe box, secured by an adhesive. The gel pad 25 forms an arcuate path from the region forward of the vamp 12, forwardly over the top of the toe box 14, across the width of the toe box 14, and to the bottom of the toe box at the sole 10. The gel pad 25 extends around the tip of the toe box 14 laterally such that the entire front end of the toe box is protected by the gel pad 25. The gel pad 25 is tapered at the edges and is thickest in the center, where the front of the toes would impact when the foot suddenly shifts forward in the boot. The gel pad [14] 25 comprises styrene and 1,3-butadiene (styrene butadiene rubber, also referred to as SBR) or similar resilient soft rubber or elastomeric compound. The gel pad has an overall durometer value of less than 0 (Shore A).

The paragraph starting on page 6, line 16 is as follows:

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Note that both the gel pad [14] 25 and the heel gel [30] pad 30 are beveled such that the upper and lower parts of the pads, as seen from the bottom of the heel to the top, are thicker than the central portion. This beveling provides maximum protection to the heel, yet minimizes the space required for the pad and provides for a smooth transition between padded and unpadded portions of the boot. It also tends to "hug" the heel and thereby increase comfort.

End